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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/977,341	10/16/2001	Andreas Eisele	110876	1634
27074	7590	08/04/2005	EXAMINER	
OLIFF & BERRIDGE, PLC. P.O. BOX 19928 ALEXANDRIA, VA 22320			ALBERTALLI, BRIAN LOUIS	
			ART UNIT	PAPER NUMBER
			2655	

DATE MAILED: 08/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/977,341	EISELE, ANDREAS	
	Examiner	Art Unit	
	Brian L. Albertalli	2655	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10-16-01
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3, 7, 11, 12, 13, 17, and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Carlgren et al. (U.S. Patent 5,099,426).

In regard to claims 1, 7, and 13, Carlgren et al. disclose a method and apparatus for performing morphology analysis of a natural language document, comprising:

means for inputting the natural language document as an input text (Fig. 1, step 20, column 5, lines 18-25),

means for tokenizing said input text, thereby producing a token stream (a list of words in the text is generated, including punctuation, therefore, the text must inherently be tokenized, column 5, lines 26-28),

means for checking for each token of said token stream, whether it is a unique token which is occurring for the first time in the token stream or a recurring token which already occurred earlier in the token stream (step 22, only distinct words are added to the vocabulary list, column 5, lines 28-30),

means for marking unique tokens with an identification (ID) (step 30, word numbers in the are assigned to words in the list, column 6, lines 11-13) and adding to recurring tokens a pointer directed towards the ID which was defined for the respective

Art Unit: 2655

token when occurring for the first time (pointers to the words numbers representing where the words occur in the original input text are generated, column 6, lines 14-22),

means for performing a morphological look-up only on the unique tokens thereby producing results of morphological look-up (step 26, each unique text word is looked up, column 5, lines 37-41),

means for storing said results of morphological look-up for the unique tokens together with the ID (step 34, word numbers are stored with lemma numbers to relate the linguistic variants to their lemma, column 6, lines 28-39),

means for reading the results of morphological look-up for the recurring tokens (the pointer list points all of the tokens, column 14-22),

means for joining all results of morphological look-up, thereby producing a stream of morphological analyses (all found lemmas as a result of morphological analysis are added to the vocabulary list, column 5, lines 55-60,

means for outputting said stream of morphological analyses (step 48, a compressed book file, including a lemma number list derived from the morphological analysis is constructed, column 7, lines 39-46).

In regard to claims 2, 3, 11, 12, 17, and 18, Carlgren et al. disclose that the storing of results of morphological lookup for the unique tokens together with the ID comprises using a self-extending hash table. Word number to lemma number list 54 is created according to the input text and requires no specific initialization to assign a size

Art Unit: 2655

for the table (column 6, lines 28-39). The dynamic creation of this list, therefore, is equivalent to a "self extending hash table".

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 4, 6, 8, 10, 14, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carlgren et al., in view of the Applicant's admitted prior art.

Carlgren et al. disclose that the tokenization and morphological lookup occurs at two separate steps, but do not disclose that the tokenization of the text or the morphological analysis is performed by a first finite state transducer and a second finite state transducer.

The Applicant's admitted prior art discloses (Fig. 4) a standard arrangement for performing morphological analysis, in which tokenization is performed with a first finite state transducer (404) and a morphological lookup is performed with a second finite state transducer (410, see also specification at page 1, lines 23-30).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify Carlgren et al. to use a first finite state transducer for tokenizing the text and a second finite state transducer to perform the morphological lookup, because,

Art Unit: 2655

as is well known in the art, finite state transducers provide more accurate tokenization and morphological analysis than simple dictionary based methods.

5. Claims 5, 9, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carlgren et al., in view of Kaplan (U.S. Patent 5,721,939).

Carlgren et al. disclose punctuation is including in the tokenization (column 5, lines 28-30).

Carlgren et al. do not disclose a first finite state transducer that includes punctuation conventions and higher level lexical information.

Kaplan discloses a finite state transducer for the tokenization of text that includes punctuation conventions (column 5, lines 33-37) and higher level lexical information (column 16, lines 12-32).

It would have been obvious to one of ordinary skill in the art at the time of invention to further modify Carlgren et al. to include punctuation conventions and higher level lexical information in the finite state transducer in order to provide a tokenization that is guaranteed to be correct and complete for a particular string, as taught by Kaplan (column 3, lines 58-62).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kadashevich et al. (U.S. Patent 5,323,316) disclose an additional morphological analyzer. Carus (U.S. Patent 5,890,103) discloses a system

Art Unit: 2655

for tokenization that determines whether a token is a candidate for further processing.

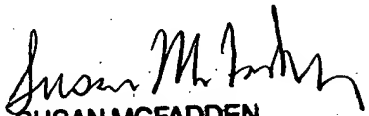
Ukrainczyk et al. (U.S. Patent Application Publication 2002/0022956) disclose a method for assigning ID's to tokenized text.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian L. Albertalli whose telephone number is (571) 272-7616. The examiner can normally be reached on Mon - Fri, 8:00 AM - 5:30 PM, every second Fri off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on (571) 272-7582. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BLA 8/2/05


SUSAN MCFADDEN
PRIMARY EXAMINER